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PROBLEMS IN THE CONSERVATION OF RAINFORESTS IN CAMEROON

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ABSTRACT The economic crisis and structural adjustments from late 1980s to early 1990s accelerated logging operations and agricultural expansion in Cameroon, which resulted in a massive destruction of the tropical forest in the southeastern part of the country. As such a forest destruction was posing local as well as global environmental problems, and attracted international attention, various projects have been promoted to save the forest ecosystems in Cameroon. While some of these projects are attempting new conservation measures, emphasizing active participation by local inhabitants, they are still facing difficulties for several reasons. This essay first examines the problems involved in the Western protectionism and nature aesthetics that prevailed in the conservation schemes of the last century. It also demonstrates that the new types of conservation attempts in the area, such as “community forest” and “adaptive management,” have not attained satisfactory results yet, due largely to insufficient information of the multiplex relationships between people and nature in the forest ecosystem and of complex ethnic relationships between hunter-gatherers and farmers in the area. In order to properly understand the relationships of people with forest in a wider social and economic context, three types of ecological investigation are proposed here; (1) cultural ecology, to show how people’s life and culture depend on the forest and its resources, (2) historical ecology, to evaluate short- and long-term impacts of human activities on the forest environment, and (3) political ecology to illustrate the relationship between the forest-related activities on the local level and the political and economic situations on the national and international levels.

Key Words: Forest destruction; Western protectionism; Local problems; People-forest relationships; Ethnic relationships.

THE PRESENT SITUATION OF FOREST DEGRADATION

The tropical rainforests of the Congo Basin cover an area of approximately 170 million hectares, and constitute the world’s second largest tract of rainforests after that of the Amazon River Basin. These forests are said to be relatively simpler than those in Southeast Asia and South America in terms of the diversity of constituent tree species, tree height, and forest structure; but, nonetheless, the African rainforests are magnificent, as they have as many as 60 to 70 different tree species per hectare. These rainforests have rich mammal faunas, in particular of primates and ungulates, and are well known for being habitats to endangered species such as gorillas and chimpanzees. This rich expanse of forests is now rapidly shrinking. The pace of forest degradation is especially rapid in countries with relatively stable political situations, such as Cameroon and Gabon.

The area of Cameroon covered by rainforests is estimated to be approximately 20 million hectares, and most of the forests are moist forests, namely, tropical rainforests intermixed with semi-deciduous forest patches. As much as 2 million hectares of the forest area is estimated to have disappeared in the period from 1980 to 1995. Especially important to note in this regard is the fact that the devaluation of the CFA franc by a large margin of 50% in 1994 made the costs of logging activities, such as transportation and wage costs in Cameroon, relatively lower than before and elsewhere, and precipitated logging activities even in the depths of forests where these activities had previously been unprofitable. Consequently, Cameroon became the world's fourth largest timber exporting country after New Guinea, Gabon and Malaysia. In the years from 1996 to 1998, when the logging activities peaked, an average of 1.7 million cubic meters of lumber worth 230 million dollars was exported each year. The export accounted for as much of one tenth of the annual timber production of the world as a whole (Bikie et al., 2000). Moreover, the logging area (including both actual and planned areas) expanded to account for as much as 76% of the total forest area by 1999, as compared to a mere 8% in 1959. By contrast, the area designated for protection as reserves amounts to a little over 6%, or 1.4 million hectares. In southeastern Cameroon, in particular, many of the forest management units (UFA=*Unité Forestière d'Amenagement*, set by the forest zoning programme in the 1990s) have already been allocated to logging concession.

It is pointed out that, in addition to massive logging operations, the economic crisis in the latter half of the 1980s and the structural adjustments implemented subsequently have also played a significant role in accelerating the forest degradation in Cameroon (Sunderlin et al., 2000). As part of the structural adjustments implemented under the auspices of the International Monetary Fund (IMF) and the World Bank, Cameroon in 1991-1992 cut back on the workforce of the public sector, and in 1993 reduced the wages of public employees by significant margins. Consequently, the unemployment rate in the cities jumped from 7% in 1993 to 24% in 1994, and the urban poor increased to account for 20% of the urban population. The deteriorating living conditions in the cities brought about a turnabout in population movement. While previously people used to flow continuously from the countryside to the cities, now urban residents began to flow back into the countryside. The rate of population increase in the countryside, which had been around 0.7% per year before the mid-1980s, jumped to an average of 4.1% in the ten-year period after the economic crisis. In the five-year period beginning in 1993, in particular, not a few villages reported greater population inflows than outflows (Sunderlin et al., 2000).

Farmers in some villages with growing populations shifted emphasis from the cultivation of export crop plants such as cacao and coffee to the production of plantain and other subsistence food crops for local markets. Many farmers cleared new fields for growing food crops while keeping their cacao and coffee fields intact, partly because of the increased demand for subsistence food crops

under the pressure of increased local populations, and also because the farmers themselves found it more lucrative to produce foodstuffs that would surely fetch some price in the local market than to grow export crops whose prices were unstable. Thus, the economic crisis and the structural adjustment programs, by bringing about an increase in the rural population and a change in the pattern of farming operations, played a part in triggering or accelerating destruction of the rainforest. As a matter of fact, analyses of aerial photographs and satellite images made it clear that in the ten-year period following the economic crisis of 1986 the forest area decreased at a rate 10 times faster than in the preceding decade.

The problem is not limited to deforestation due to stepped-up logging and expanding farmlands. Some parts of the remaining forests, even if they remain uncut, have already been reduced to “empty forests,” deprived of much of their important ecological constituents, by the excessive pressures of hunting and other forms of exploitation of forest resources. In the Congo Basin areas, bushmeat still remains the primary source of animal protein for local people, who consume on average approximately 100 g per day (Wilkie & Carpenter, 1999). Cattle-raising is rarely practiced widely in tropical rainforests because of the prevalence of tsetse flies and the shortage of pasture land. Bushmeat does not only constitute for local residents a crucially important source of animal protein that is not readily available from other sources. In the eyes of the local residents, who have increasingly lost touch with nature because of the process of urbanization and the resulting process of forest degradation, bushmeat also takes on a special value as embodying the “power of wild nature” not available from domestic meat and fish. Residents of large cities prefer hard, smoked bushmeat to beef and pork, and they sometimes pay even higher prices to get it. Trade in bushmeat itself has a long history, but the recent increases in both the amounts of bushmeat traded and consumed, and the rate of expansion of the bushmeat market have been phenomenal. Particularly in the region where the shipping of cacao and coffee, the main sources of cash income for rural farmers, has been made difficult by the civil wars, the resulting economic confusion, and the degradation of social infrastructure, trade in bushmeat has gained importance as a readily available source of cash income, replacing the production of export crops. In countries like Cameroon, where the structural adjustment programs such as employment adjustment and wage reductions have caused a reflux of population from the cities to the countryside, these developments have further accelerated the expansion of bushmeat trade.

There are reports that hunting or bushmeat trade can earn a greater cash income than wage labor. In the vicinity of the Dzanga-Sangha National Park in the Central African Republic, hunters earn an average annual income of between US\$400 and 700 per person (Noss, 1998), an amount comparable to or higher than the annual salary paid to a park guard. It is reported that in the vicinity of the Dja Faunal Reserve in Cameroon, a hunter earns an annual income as large as US\$650 (Ngegues & Fotso, 1996). These examples suggest that, at least in the short run, hunting is a well-paying activity in this region.

The thriving commercial hunting for wild animals has been reducing animal populations to a considerable extent. Some reports estimate that hunting activities have already reduced the populations of forest-dwelling antelopes in the Congo Basin by half (Hart, 2000). It is feared that stepped-up commercial hunting is especially endangering rare species such as gorillas and chimpanzees, and large-sized mammal species such as elephants. All these animals have slow rates of reproduction, which makes them susceptible to hunting activities; and given the ecological peculiarity of tropical rainforests, namely, the existence of biodiversity in the forests, these species are all the more susceptible to hunting activities, for the following reason. Assume that hunting activities are carried out in an environment with a low degree of biodiversity, and are thus aimed at specific game animals; then, as the population densities of the game animals decreases under the pressure of hunting, the hunting operations become so inefficient that they will be eventually abandoned. By contrast, hunting activities in rainforests characterized by rich biodiversity will not be abandoned when the population densities of the specific game animals decrease to low levels, but will continue so long as the population densities of other game animals remain high enough. Further, if hunters encounter rare species in the process, such species will also fall prey, with the result that large-sized mammals and species with slow rates of reproduction will be exterminated first.

Various activities to protect tropical rainforests have thus been on the increase. But recently, emphasis has begun to be placed on the importance of approaching the question of rainforest conservation from perspectives different from conventional ones. Conventionally, the question of rainforest destruction has been viewed primarily from the global perspective, and out of concern for its adverse effect on the global atmosphere (namely, global warming), and the loss of biodiversity (or gene resources). This is why the issue of rainforest destruction has been dubbed a “global environmental problem.” It has been understood, moreover, that a “wildlife sanctuary” totally free from human activities must be created in order to safeguard the “global commons” (the common property of the entire human race). This view is a refigured classical protectionism readjusted to suit the present times, characterized by the unfolding of the globalization process, but it begs very serious questions. The world is neither homogeneous nor unified to such an extent as to warrant the perception of a global question as an issue of a local population. It is often “outsiders” from the “northern” hemisphere of the world who vociferously clamor for the conservation of nature. Looked at from the standpoint of local residents this must appear as an outrageous act of interference by “foreigners” who are sticking their noses into other peoples’ lands, in which they do not live, and concerning which they have no rights. Such a critical reaction seems justifiable especially when looked at in light of the fact that the present-day global environmental crisis can be traced back to the industrial civilization of the “north” and colonial exploitation by the “north” (Furukawa, 2001).

It should be pointed out, however, that the process of forest degradation that is unfolding today, threatening to reduce the remaining rainforests to “empty

forests,” is also threatening to deprive local residents of the very bases for their livelihoods. The slash-and-burn farming and hunting which have been sustaining the livelihoods and cultures of the forest-dwellers for centuries will perhaps exceed the level necessary for ensuring their sustainability, threatening to make their livelihoods unviable in the near future. For these forest-dwellers, however, forest degradation is a “local environmental problem” not a “global environmental problem.” Looked at from the standpoint of the forest-dwellers, therefore, conservation of natural rainforests by turning them into “wildlife sanctuaries” poses a serious threat to their livelihoods, and for that matter, these are no different from forest degradation itself. This fact points to the inescapable need for us to design a new model of nature conservation that can replace the conventional paradigm of nature conservation with its call for the establishment of “wildlife sanctuaries.” The new model of nature conservation should give priority to realizing the co-existence of people with nature in the forest, instead of expelling human beings from the forest. Even though various attempts have come to be made recently with regard to the conservation of nature, we have not yet obtained a well-defined image of what the desirable relationship between nature and human beings should be. Efforts to envision a world where nature and human beings can co-exist may appear to be a postmodernist illusion in the eyes of “classical” protectionists (Attwell & Cotterill, 2000). Nonetheless, in contemplating the conservation of nature, it seems indispensable to at least harbor a clear-cut image of what a desirable world can or should be like.

RE-EXAMINATION OF THE WESTERN VIEW OF NATURE CONSERVATION

It is often pointed out that conventional Western conservationism has at its basis an aesthetic consciousness that cherishes “pristine nature” before all else. Let us, therefore, begin by examining what problems are inherent in the Western conservationist view that underlies the conservation schemes of building “national parks” as “wildlife sanctuaries.” In so doing, I will rely primarily on the following two works as points of reference: observations made by Crandell (1993) about Western nature aesthetics; and a stimulating book on the conflicts between nature preservation and people’s “landed moral economy” in East Africa offered by Neumann (1998).

One typical example of the influential approach to nature conservation can be found in national parks in Africa. Herds of ungulates calmly feeding on grass in vast expanses of savanna; predatory animals such as lions and cheetahs eyeing these game animals from behind bushes; and groups of scavengers like hyenas and vultures feeding on the carrion left by the predatory animals. These are familiar scenes we frequently come across through the television in our living rooms or through tourist posters, but what these scenes actually convey are considerably standardized and stereotyped images of Africa. In a savanna, as portrayed by these familiar scenes, it looks as if everything unfolds in

exactly the way nature is supposed to work. This is exactly the image of “ideal nature,” or the image of “what Africa should be like,” that the Western world has been counting upon Africa to offer. However, removed from these scenes are the human beings who are living and working there. Also concealed is the fact that the land once constituted an arena of livelihood for pastoral people.

According to Crandell (1993), Western nature aesthetics which proposes to encapsulate ideal nature in national parks has its origin in landscape paintings which were popular in the 16th and 17th century. The aristocrats and middle-class people who were on the rise at the time considered the scenery captured by landscape paintings as ideal nature, and set out on journeys in search of such ideal scenery. Thus, as if looking at a landscape painting, they demarcated a specific segment of nature and partitioned it off from the rest of nature by means of borders or fences, admiring it from the outside. In other words, nature meant for them a landscape, something that was to be “separated” and “observed” (Williams, 1973: 120). Nature became a beautiful landscape to be looked at from the window of a comfortable train or car, that is to say, an object to be observed and appreciated by visitors from the “outside.” This was radically different from the way nature was experienced by the “insiders,” namely, those living and producing inside nature. Consequent to the establishment of a perception that regarded a landscape as an object to be aesthetically appreciated by the “outsiders,” the gap separating “aesthetic” nature from “practical” nature as an arena of production activities began to grow wider, with the result that pristine nature free from human intervention came to be appraised as ideal nature. For the aristocrats of the time, and for the middle class in later years, having occasions for appreciating and appraising supreme nature was deemed essential for establishing one’s class identity. As Neumann (1998) points out, the practice of going on “grand tours” in search of picturesque landscapes, that was first adopted by aristocrats of the 17th century and later by the bourgeoisie, has been subsequently carried over into the practice of “consumption of nature,” represented by popularized tours of national parks.

It was against the backdrop of this nature aesthetics of the Western world that the United States declared in the latter half of the 19th century (in 1872) Yellowstone to be the world’s first national park, setting the precedent for a large number of national parks subsequently established around the world, including Europe and Africa.

Western colonizers who began to make inroads into Africa in the latter half of the 19th century, found “wild nature” there and tried to give shape to their own aesthetic consciousness. They thought that Africa still maintained an intact “wild landscape,” which had already disappeared from their home countries. Such a perception reflected their own dualistic view that identified themselves as representing “civilization” and the colonial territories as manifesting “nature.” This view took no heed of the fact that what Europeans thought to be the landscape of “pristine nature” had actually played host to many generations of local residents who had left behind great achievements there.

In order to build national parks as encapsulations of “ideal nature,” it

was not sufficient to simply remove human activities from the parks. It was found imperative to eliminate their existence from the histories of the lands designated for the parks. What justified this line of thinking was the existence of a view of history that saw Africa as a pristine land of wildlife free from human interference from the outset, a land that would be transformed into a civilized and productive space as and when it came under the full control of the colonizers' cultural and economic influences. Built in accordance with an historical view such as this, the national parks became legacies commemorating the images of what early colonizers believed to be primitive scenery, or pristine savageness, or what they thought first confronted them when they arrived in Africa.

However, the exclusion of the human hand from protected areas can sometimes induce nature to develop in the opposite direction from that which was originally expected (Neumann, 1998). Intentional or non-intentional human interference is often required for nature to operate in a "desirable" way. In the case of the Yellowstone National Park, the occasional outbreak of a natural fire of moderate size was indispensable for maintaining the park's beautiful forest landscape. The problem was that a wild fire leaves behind it an expansive forest of charred tree trunks, the sight of which is radically different from the ideal image of "picturesque nature." The park authority, therefore, took steps to prevent the outbreak of fires. Now, with the outbreak of small-sized fires prevented, large volumes of dead trees began to pile up on the ground, with the result that once a fire started, it would often easily develop into a fire of unmanageably huge proportions. Phenomena of a similar nature have been reported from many national parks or protected areas. It is reported, for example, that cattle raising people and their animals were driven out from a certain area of the Serengeti National Park in Tanzania so as to preserve the extensive grassland, with the result that trees whose growth used to be restrained by the presence of the cattle soon began to grow so thick and rank as to obstruct the magnificent view of the savanna grassland. These episodes reveal that the preservation of nature in an "ideal" form can seldom be accomplished by leaving nature to take its own course, but often requires human interference. Indeed, this is exactly what is meant by the self-contradictory concept "wildlife management."

A NEW FORM OF NATURE CONSERVATION

The history of national parks in Africa in the colonial era was one of conflict between the colonial governments and the local populations over the access to land and resources. After winning independence during the 1960s, the governments of newborn African countries inherited this history of conflict, continuing to suppress encroachment on the national parks. As poaching continued unabated, they sometimes adopted harsh means of dealing with poachers, including torture and shooting. Despite such suppressive measures, the

populations of wild animals have been declining precipitously. During the 1980s in Tanzania, for example, the population of elephants decreased by half, while that of black rhinoceros by as much as 98% (Neumann, 1998).

These harsh realities gave rise to an awareness in the early 1980s about the need to reconsider the heavy-handed approach to nature conservation. Especially in the "World Conservation Strategy," adopted in 1980 by a group of international organizations including the International Union for Conservation of Nature and Natural Resources (IUCN) and the World Wildlife Fund (WWF), it was emphasized that it is necessary for conservation programs to seek a balance between protecting wildlife and satisfying the needs of local residents. Since then, a common understanding has arisen that in order for a nature conservation program to become a success, certain prerequisites would have to be duly satisfied: active participation by local residents in the program's planning and implementation; the need to design and implement a nature conservation program in combination with a development program; and the distribution of the profits gained from the conservation program to the local communities. In fact, a series of conservation programs that are in line with the strategy's orientation have been put into effect: resource management programs based on active participation by local residents, including the CAMPFIRE (Communal Areas Management Program for Indigenous Resources) in Zimbabwe; and integrated conservation programs, such as the one implemented at the Korup National Park in western Cameroon, which combines the "core area" earmarked for nature conservation, the "buffer zones" in which local residents are allowed to utilize the forest for some, mainly extractive, purposes, and development zones lying outside the buffer zones. Furthermore in Cameroon, the Forest Law was revised in 1994, explicitly allowing indigenous forest-dwellers to practice "subsistence hunting" with the use of "traditional methods," and establishing designated areas such as "community forests" and "community hunting zones," and formulating legal rules specifying how forest resources of such areas could be used by local residents and how local communities should be involved in their management (Government of Cameroon, 1994). Even under the Hunting Law of 1981, forest-dwellers were formally granted the right to practice "hunting by means of traditional methods" (Government of Cameroon, 1981), the Revised Hunting Law of 1994 further expanded this right. Although it still remains vague as to what is actually meant by "traditional methods" of hunting and "subsistence hunting" and also about the concrete procedures by which resource management plans are drawn up and approved, it seems that the overall situation is changing in favor of local residents.

However, the questions of how to secure local people's livelihoods and how to safeguard their rights constitute only part of the problem. Working out concrete procedures for dealing with these practical matters is undeniably important, but these alone cannot solve the entire problem. What matters is the fact that indigenous forest-dwellers are being uprooted by nature conservation programs from their living spaces with which they have been accustomed for many generations. It is, therefore, worthwhile considering whether and how it

is possible to transcend the Western dualistic view of nature conservation and envision a world in which forests and human beings can co-exist.

A WORLD WHERE HUMAN BEINGS CO-EXIST WITH FORESTS

In envisioning the image of a world where human beings co-exist with forests, I would like to draw upon my experiences with forest-dwellers in the Congo Basin. Since the early 1970s, I have been doing fieldwork on hunter-gatherers who are usually known as “Pygmies (Ichikawa, 2001).” In the initial phase of the fieldwork, I concentrated on studying the Mbuti living in the Ituri forest in the Democratic Republic of the Congo (formerly Zaire), paying frequent visits to them, and carrying out ethnographic research on such themes as their subsistence activities, social structure, and perception of nature including forest plants and animals. Subsequently, when the political situation in Zaire grew unstable in the early 1990s, I changed my research field to the Republic of the Congo across the Congo River, beginning to do research on the Aka who live in the area bordering the Central African Republic in cooperation with younger researchers at Kyoto University. A few years later, however, the situation in the Republic of the Congo also grew unstable, forcing us to change our research field yet again, this time to Cameroon, located at the western end of the Congo Basin, and to start doing research on the Baka living in the area. We were thus forced to change our research areas twice in a span of approximately 10 years, wandering from Zaire (Congo-Kinshasa) to the Congo-Brazzaville, and then to Cameroon like “research-refugees.” The frequent changes in research areas proved to be rather a blessing for me, since I was eventually able to get in touch with all the major groups of hunter-gatherers in Central Africa.

The distance between the Ituri forest at the eastern end of the Congo Basin and the western end of the Basin, located in the southeastern part of Cameroon, measures as much as 2000 kilometers. While the Mbuti and the Efe living in the Ituri forest speak languages of either the Bantu or the Sudanic language family, the Baka in Cameroon speak languages which, belonging to the Eastern Adamawa language family, are significantly different from those of the Mbuti and Efe. Despite the significant geographic distance and the linguistic differences separating them, these groups of forest-dwellers share surprising degrees of cultural similarity with each other. All the groups of forest-dwellers share the “cultures of forests” that they have formed on the basis of their strong reliance on and their intimate interactions with the forests.

Forest-dwellers have a surprisingly profound knowledge of animals and plants in the forest. You will soon realize this if you take a walk with them in the forest just for a few hours. It is amazing to know how much they can tell just by glancing at the plants growing thick around them, or at very indistinct tracks left on the ground, or by listening to murmuring sounds above them. A glance at their camp in the forest is revealing of how heavily they depend on

forest products for survival. Their dome-shaped huts, and the panniers, baskets and ropes with which to carry things are all made from materials procured within the forest. Scattered here and there in the camp ground are unused and discarded food scraps of wild fruits and yams gathered from the forest. Many children's toys are also made of nuts and leaves of forest plants. After the sun goes down, they dance and sing until late at night with the spirits of the forest that emerge from within the depths of the forest when invoked by the rising tones of their polyphonic chorus. All aspects of their lives, not merely the material aspects related to their foods, huts, and tools, but also those related to play and rituals, are inseparably enmeshed with the forest. Their culture makes use of diverse potentialities of the forest to the fullest extent. Among our ongoing field research projects, which aim to gain a holistic understanding of the culture of these forest-dwellers, we are focusing our efforts on a project to gather and collate the discrete pieces of knowledge these people have about forest flora. Code-named "Aflora," the project endeavors to put on record all and any of the bits of knowledge they have about forest flora, namely, all the pieces of information concerning how they perceive and make use of forest flora both materially and mentally, and directly and indirectly (Ichikawa, 2001). In a sense, the project may be characterized as an endeavor to preserve the rich body of intellectual assets, or intangible cultural assets, accumulated by many generations of forest-dwellers; it is true that only through a research endeavor such as this, will it become possible for us to understand the significant extent to which these people depend on the forest.

While it is important to understand their heavy dependence on the forest, it is no less important to see that they are contributing to the reproduction of the forest ecosystem by virtue of dwelling in the forest and making use of forest resources. Take, for instance, the fact that many of the edible plants they use are what are called "sun trees," that can germinate and grow well only in places that receive plentiful sunlight. Camping sites in the forest, which are cleared of trees of low and medium heights and which receive sufficient sunlight, are suitable for the growth of such sun trees. Moreover, food scraps, roots and fruit seeds, discarded on the outskirts of a camping site, nurture seedlings of edible plants. In fact, as we walk around a camping site, we see many seedlings of such useful plants growing here and there. Many of the sweet fruits and berries available in the forest, which do not lend themselves to easy separation of the flesh from the seed, are swallowed up in their entirety, seeds and all. In the dispersion and germination of the seeds of some plants, therefore, human beings as well as animals play a significant role by eating these fruits, separating the flesh and seeds in the digestive tract, and excreting the seeds in other places, more favorable for germination and growth. Moreover, the presence of human beings in the forest has another important effect; enrichment of the soil in and around the camping site, as large quantities of subsistence materials such as firewood and foods gathered from an extensive area of the forest are reduced to ash and excrement in or near the camping site. In other words, the nutrients forest plants have absorbed from the soil

are recycled back to the soil after intermediation by human consumption. According to a rough calculation, net increases in nutrients accumulated in or around a camping site resulting only from the consumption of food by a group of 50 forest-dwellers during a one-month stay in the site are estimated to be approximately 25 kilograms of nitrogen and 15 kilograms of phosphorus. The soil of a tropical rainforest is known to be poor in nutrients, but a camping site of forest-dwellers is a place where the thinly dispersed nutrients of the forest are gathered and accumulated by human activities. This means that, even though useful resources near the camping site may appear to decrease in the short run as a result of human consumption, the forest-dwellers, through their own activities, are in fact sowing the seeds for the reproduction of forest resources in the future. Stated differently, the life of forest-dwellers is enmeshed in the cyclical mechanism of the larger ecosystem of the forest.

At present, Hirokazu Yasuoka, a doctoral candidate at the Graduate School of Asian and African Area Studies (ASAFAS), Kyoto University, is undertaking field research on subsistence activities (Yasuoka, 2006) and the impacts of human activities on the forest ecosystem, meticulously examining how the distribution and the growth of useful plants and animals, as well as the density of traces of human activities and their impacts, differ among various types of vegetation, such as the mature forest, the secondary forests of different stages that have grown in the abandoned camps, villages, and slash-and-burn fields (see, Yasuoka & Shikata, in prep.). If Yasuoka's field research proves empirically that human activities have positive impacts on the forest environment as human habitat, it will be established that not only do forest-dwellers depend on the forest for their life, but they also perform an active role in facilitating the reproduction of forest resources. It is expected that this approach, which proposes to locate human beings within an ecosystem, which is itself a complex interactive system, will perhaps enable us to transcend the Western dualistic view that pits nature and human beings (or their cultures) against each other. It will simultaneously make us realize that most of the forest landscapes we see today are in fact a historical product that has been formed through many years of interaction between human beings and the forest ecosystem. Such a realization will necessitate a call for a radical rethinking about the conventional approach to nature conservation that has regarded human activities only as a destructive factor.

It should also be kept in mind, however, that such an interdependent system between human beings and forests no longer exists in isolation from the rest of the world. Even the world in the depths of African forests is, to one extent or another, in contact with wider societies, such as nation states and international economic and political systems. Conservation movements, and the very phenomena of massive forest destruction that gave rise to such movements to begin with, are interlocked with global developments concerning economics, politics, and information. Any attempts at building a "world of co-existence between forests and human beings" in isolation from the macroscopic situation are likely to end up creating a "living museum," as criticized by advocates of

economic development. Living human beings are not samples to be displayed in a museum, but are beings that undergo constant changes through mutual interaction between the external situation and internal dynamics.

This does not immediately mean that they are victims of the exogenous political and economic situation, or the “power relations” that dictate such a situation, but it is also true that their life and culture cannot be explained only by reference to their internal dynamism. Take, for instance, the fact that forest-dwellers in central Africa are well known as “elephant hunters” or “dancers of God.” The process by which they came to be known in the modern world by these names must have overlapped, perhaps to a considerable extent, with the process by which they were marginalized as a result of the rise of trade in forest products, such as ivory and hides, and of tourism. At present, most of the Baka in Cameroon have become sedentarized along the major roads, and stand in a somewhat subordinate relationship with their farmer neighbors, but such sedentarization and subordination must have been linked to a large extent to the need for control over their manpower, i.e., by economic developments such as the expansion of cash crop (cacao, in particular) production, which requires increasing labor power inputs. It seems also necessary to pay attention to the fact that the cash incomes they earn by trading in forest products, such as bushmeat and honey, have given them access to school education and modern medical services. What is more, the recent upsurge of conservation movements around the world must bring about changes in their relationship with their farmer neighbors, in their relationship with the forest, and in their own self-identity.

It is, therefore, necessary to examine the relationship between the life and culture of forest-dwellers at a local, microscopic level, on the one hand, and the political and economic system of wider society that shapes its framework at a macroscopic level, on the other. Given especially the fact that the ongoing political and economic crisis that is afflicting many African countries is also posing various problems to this relationship, it seems all the more urgent to contemplate how forest-dwellers can possibly cope with such problems, that is to say, how they can possibly take the initiative in dealing with the mounting impacts of globalization phenomena, such as the expanding market economy, worsening environmental destruction, and nature conservation movements.

To sum up the foregoing observations, the image of a “co-existence between forests and human beings” may be defined through research that combines three different perspectives of ecological investigation: (1) cultural ecology that probes into how the culture of forest-dwellers depends on the forest ecosystem; (2) historical ecology that examines how forest-dwellers, by living and performing livelihood activities in the forest, are involved in the dynamics of the forest ecosystem; and (3) political ecology that explores the relationships between these phenomena and the macroscopic political and economic situation.

NEW ATTEMPTS IN CAMEROON

In Cameroon, nearly half of the land area is covered with forests, and many people depend on the forests and their resources for their life. It is the Baka whose lives are most heavily dependent on the forest environment. In areas along the roads of East Province that lead from Lomié to Ngoïla, and from Yokadoma to Moloundou, approximately 25,000 to 30,000 Baka are living by hunting and gathering forest resources. Around the time following the end of World War I when Cameroon, a former colony of Germany, became a mandated territory of France, these people seem to have been still living in the forests, leading the nomadic life of hunter-gatherers. Subsequently in the late 1950s and early 60s, however, their sedentarization was promoted by French government policy (Althabe, 1965; Joiris, 1998). Built adjacent to roadside villages of settled farmers were the Baka's houses made of mud and wood, which were similar to the farmers', but much smaller in size. They were encouraged to grow plantains and cassava by clearing nearby forestland and opening up farming plots. Nonetheless, with their farming activities far from sufficient to sustain their living, the Baka continue to practice hunting, fishing, and gathering of nuts, fruits, and roots in the forest. Collecting the honey of wild honeybees and edible caterpillars, though practiced only on a seasonal basis, also comprises an important component of their livelihood. They obtain from their farmer neighbors starchy food that is in short supply in exchange for these forest products, or by assisting with the farmers' work such as clearing the forest, weeding and harvesting. Especially when the cultivation of cash crops such as cacao and coffee thrived, the Baka's labor power came into greater demand by the farmers. On the other hand, some of the Baka began to clear large enough farming plots to grow agricultural crops for subsistence or even grow cacao and earn cash incomes, with the result that conflicts are erupting between them and their farmer neighbors over the use of readily accessible land plots and labor power.

It was during the 1970s that logging activities began to take place in the habitats of the Baka on a small scale. In the early 1990s, as pointed out already, these activities were drastically stepped up under the effect of the economic crisis and the structural adjustment programs. The surge of logging activities is reported to have been caused by the government of Cameroon which, hard pressed by external loans, sold logging concessions to France and other creditor countries in exchange for the unpaid loans. In 1994, soon after we moved our research field to southeastern Cameroon and began to do research on the Baka, we observed a large number of trucks loaded with huge tree trunks passing ceaselessly from the East Province toward the port town of Douala. On average more than a hundred trucks a day hauled trees from Yokadoma and its vicinities alone, and even during the rainy season when the road conditions were poor, as many as fifty trucks a day passed by. Narrow stretches of forestlands on either side of trunk roads were left unscathed as residential and farming areas, but there is an extensive network of logging

roads that crisscrosses the interior parts of the forests, which can be clearly seen in the recent satellite images of the region.

As intensified forest destruction aroused international concern, nature conservation movements began to pick up momentum during the 1990s. Following the designation in 1990 of the Dzanga-Sangha area of the Central African Republic as a national park, a number of voices were raised emphasizing that it would be desirable, for the sake of facilitating better park management, to expand the park into a trans-frontier protected area stretching over the three countries of the Central African Republic, the Congo and Cameroon. In response to these calls, the World Wildlife Fund (WWF), the Wildlife Conservation Society (WCS, a United States-based NGO), and other organizations carried out ecological surveys of the Cameroonian portion of the proposed protected area, namely, the area stretching along the western side of the Sangha River, to gather data for use as the basis of the conservation program. The conservation activities grew intensive enough to make headlines in 1999, when Prince Philip Mountbatten, the Duke of Edinburgh, president of WWF, made a visit to the Lobéké area on the western bank of the Sangha River. Two years later, on March 19, 2001, an area measuring 212,500 hectares in and around the swamps on the Lobéké River was designated as a national park. This was followed, after a short interval, by the launching of the *Jengi* Project, with its aim to protect 670,000 hectares of forestlands that stretch over the valleys of the Boumba, the Bek, and the Nki Rivers. The project led to the establishment in 2005 of two national parks, the Boumab-Bek and the Nki National Parks. “*Jengi*” is the name of the most important forest spirit that appears in the Baka’s singing and dancing performances (Tsuru, 1996).

Several new features are being introduced as part of these conservation programs. For one thing, these programs allow human beings to use forest resources within the protected areas to some extent. In Lobéké, outside poachers are intruding into the forest for hunting wild animals with the use of guns, and trapping parrots for sale as pets; despite this reality, however, local residents are allowed, for the time being, to enter the national park area and to fish, forage edible and medicinal plants, and harvest honey there (WWF-Cameroon, 2001). Another feature is that a new method of park management called “adaptive management” has been introduced, in place of the conventional, top-down bureaucratic method of forest management. Based on the realization that unpredictable events can occur in an ecosystem, the adaptive management method purports to implement conservation programs in a flexible manner by having dialogues with local inhabitants and by readjusting the programs to better suit the actual developments of the situation, instead of sticking fast to a certain master plan that has been prepared beforehand. Another new innovative approach to conservation is that of treating local inhabitants not as destroyers of the forest who stand on the way of conservation programs, but rather as constituent members of the forest ecosystem, who can perform positive roles in the implementation of a conservation program (Davenport, 1998; Curran & Tshombe, 2001). As a matter of practical concern, if an extensive protected

area having the perimeter of several hundred kilometers were to be conserved in a high-handed manner, the amount of human power and the monetary cost required simply for monitoring poachers would be enormous. Given this fact, it would be far more economical and effective to encourage local inhabitants to take an active part in the conservation activities on their own initiative. It has been realized that as a means of nature conservation, a "wildlife sanctuary" which strictly controls human interference is not necessarily more effective than a "multiple-use reserve" which approves of the local inhabitants' use of its resources.

Even so, there are still factors that make it difficult for people like the Baka to actively take part in conservation programs. One such factor is that a conservation program, as well as a development program that is carried out as a tie-in with it, entail the denial of their culture. As Hewlett (n.d.) points out, even though government officials and foreign-based NGOs involved in programs for the development of Baka communities are often harshly opposed to each other, they nonetheless share the same perception about the Baka people. In other words, they are firmly convinced that developing the Baka people means to further promote their sedentarization and their adoption of modern agricultural operations, and that only through this will it become possible for the Baka people to become independent from their farmer neighbors and to participate in the national society as full-fledged members. They also believe that nurturing leaders within Baka society will help make this transition proceed smoothly. Nonetheless, all these perceptions deny the present life and culture of the Baka who live as hunter-gatherers in the forest, forming an egalitarian society.

Furthermore, the manner by which conservation programs are introduced is open to question. Recent reports on such programs, almost without exception, point out the importance of dialogues with local inhabitants in the course of the implementation of the program (cf. Curran & Thombe, 2001). It should be kept in mind, however, that people like the Baka have been subjected to "dual marginalization;" "dual" in the sense that Cameroon itself has been marginalized since the colonial days, whereas the Baka have been subjected to further pressures of marginalization that come from within the country (even though they have been trying to evade such pressures by "retreating into the forest" and by other means). There are obstacles that make it difficult for these people to become actively involved in conservation programs. The actual process of implementation of a conservation program on-site usually begins with the act of *sensibilisation*, namely, the act to arouse interest in the importance of nature conservation, undertaken by representatives from the field office of the national government or an international NGO. In this area it is usually the role of *animateurs*, or leaders, chosen from among the local inhabitants, to educate the local population about conservation and disseminate information about the conservation program in the local community. In the case of the recently-launched *Jengi* Project, it is reported that thanks to enthusiastic activities of the *animateurs* dispatched from the aid organizations such as the WWF and

the GTZ (a German government-funded organization active in the field of international assistance), some communities of settled farmers have already reached an agreement on how local residents should play active and responsible roles in the conservation and management of the national parks. However, the project has made little progress in dealing with the Baka people who are most strongly dependent on the forest resources (Hattori, in press). Both the method by which *animateurs* are selected, and the language they speak seem to be important causes for this. Without exception, *animateurs* are chosen from among the settled farmers of the Bantu or other ethnic groups, who stand at advantage over the Baka people in the local communities. It is perhaps difficult to choose leaders from the egalitarian society of the Baka people. And yet, habitually forced into a position of subservience to the farming people and sometimes despised by them, the Baka people seem unlikely to listen obediently to *animateurs* chosen from among the farming people. At the very least, they will be unwilling to scale down their activities as hunter-gatherers simply because they are told to do so by such *animateurs*.

It is also important to note that, even though *animateurs* are expected to adopt a casual and informal manner in leading local inhabitants into supporting conservation activities, what they actually do in most cases is to give lectures to the assembled villagers in an oratorical tone, simply repeating what they have been taught. Even though settled farmers may eagerly seize such opportunities to transform themselves into promoters of the conservation program, it is quite doubtful whether the Baka people are willing to listen to such lectures. As a matter of fact, according to Shiho Hattori, a doctoral student at ASAFAS, Kyoto University, who has carried out a field survey on the actual situation of animation in this area, a majority of the Baka people, who at first responded to the requests to attend local meetings, stopped attending as soon as they found that they would gain no material benefits by taking part in the conservation program (Hattori, in press). In so deciding, they are reported to have murmured to each other: "We have no choice but to continue hunting, even if we are prohibited to do so." These words are revealing of both the state of confusion into which they have been thrown and their quiet determination to resist the outrageous calamity that is befalling them. As such, their attitude toward the conservation programs is different from that of settled farmers some of whom are willing to respond positively to the new opportunities being opened up by these programs.

The idea of appointing local residents to *animateurs* itself, which is meant to tap local human resources and mobilize them for the implementation of nature conservation, can be regarded as part of the new approaches being introduced into conservation work, such as decentralization and community participation. However, in order to make such an attempt a success, it is indispensable to pay close attention to the complex social and power relationships among different ethnic groups in the local area, and take steps to ensure that the implementation of a conservation program will not end up reinforcing the existing unequal inter-ethnic and social relationships. If this is not carried out correctly, the Baka

people who stand in a subordinate relationship to settled farmers will not find any positive meaning in the conservation program. Stated differently, the way toward encouraging the Baka people to take an active part in the conservation program should also lead to raising their social status in relation to the farming people, namely, liberation from the pressure of the “dual marginalization” that they have been subjected to.

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